

AMENDMENTS TO THE CLAIMS

Please cancel Claims 17-19, 21 and 22 and amend Claims 1, 4, 5, 8, 12-16, 23 and 24 as follows.

LISTING OF CLAIMS

1. (currently amended) A vehicle air conditioning system ~~having in combination with a vehicle having a passenger compartment, the system comprising:~~

temperature adjusting means for adjusting a temperature of conditioned air to be blown from a blowing opening into ~~[[a]]~~ the passenger compartment, the blowing opening being provided behind a front seat in the passenger compartment,~~the system comprising:~~

a non-contact temperature sensor for detecting a temperature, without directly contacting the blown air, of a sensing region including the blowing opening, the non-contact temperature sensor being located at a front side of the front seat in the passenger compartment in a vehicle front-rear direction; and

control means for controlling the temperature adjusting means to achieve a desired temperature of the blown air using the temperature detected by the non-contact temperature sensor.

2.-3. (cancelled)

4. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 1, wherein

the control means controls such that if a difference between an expected air temperature and an actual air temperature detected by the non-contact temperature sensor is larger than a preset value the temperature control by the control means relative to the detected temperature is not affected by the large difference.

5. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 1, wherein

the control means controls the temperature adjusting means using a temperature detected by the non-contact temperature sensor after a predetermined time has passed after the start of air blowing.

6.-7. (cancelled)

8. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 1, wherein

the non-contact temperature sensor includes a plurality of temperature sensing elements, each capable of detecting the temperature of the sensing region in the passenger compartment in a non-contact manner, the temperature of the sensing region being detected by at least one of the plurality of temperature sensing elements.

9.-11. (cancelled)

12. (currently amended) A vehicle air conditioning system,~~including in~~
combination with a vehicle having a passenger compartment, the system comprising:

a face blowing opening communicating to a first passageway, a foot blowing opening communicating to a second passageway, and a third blowing opening, the third blowing opening being provided behind a front seat in ~~[[a]]~~ the passenger compartment and communicated to a third passageway,~~the system comprising:~~

a non-contact temperature sensor mounted for detecting a temperature, without directly contacting blown air, of a sensing region including said third blowing opening, the non-contact temperature sensor being located at a front side of the front seat in the passenger compartment in a vehicle front-rear direction;

means for calculating a required blowing temperature using at least a set temperature;

means for calculating a target blowing temperature from said required blowing temperature; and

temperature adjusting means for causing the temperature of air inside said third passageway to approach said target blowing temperature in accordance with at least said target blowing temperature and the temperature detected by said non-contact temperature sensor.

13. (currently amended) A vehicle air conditioning system,~~including in~~
combination with a vehicle having a passenger compartment, the system comprising:

a face blowing opening communicating to a first passageway, a foot

blowing opening communicating to a second passageway, and a third blowing opening, the third blowing opening being arranged in a vicinity of a passenger and communicated to a third passageway, ~~the system comprising~~;

a non-contact temperature sensor mounted for detecting a temperature, without directly contacting blown air, of a sensing region including said third blowing opening, the non-contact temperature sensor being located at a front side of the front seat in the passenger compartment in a vehicle front-rear direction;

means for calculating a required blowing temperature using at least a set temperature;

means for calculating a target blowing temperature from said required blowing temperature;

temperature adjusting means for causing the temperature of air inside said third passageway to approach said target blowing temperature in accordance with at least said target blowing temperature and an entire surface temperature of said third blowing opening detected by said non-contact temperature sensor;

blowing mode selecting means for selecting either one of a face mode and a foot mode;

a temperature sensor for detecting a temperature at the foot blowing opening, wherein

said means for calculating a target blowing temperature includes means for calculating at least a target blowing temperature for the face blowing opening and a target blowing temperature for the foot blowing opening that is higher than the temperature for the face blowing opening, based on the required blowing temperature;

and

said temperature adjusting means includes means for causing the temperatures of air in said first, second, and third passageways to approach their respective target blowing temperatures in accordance with at least an entire surface temperature of said third blowing opening detected by said non-contact temperature sensor, a temperature at the foot blowing opening detected by the temperature sensor, the blowing mode selected by said blowing mode selecting means, said target blowing temperature for the face blowing opening, and said target blowing temperature for the foot blowing opening.

14. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 12, wherein said temperature adjusting means comprises:

an evaporator and a heater core arranged in the passageway;

a heat adjustment bypass passageway arranged in the passageways, for bypassing the heater core;

an air mix damper for adjusting a volume of air passing through said heater core and that of air passing through said heat adjustment bypass passageway to supply air into each of said passageways;

a cooling air bypass passageway for bypassing said heater core and said heat adjustment bypass passageway so as to direct cooling air from said evaporator directly into said third passageway; and

a bypass open/close damper for opening and closing said cooling air bypass passageway.

15. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 14, wherein

a degree of opening of said air mix damper is feedback controlled using a deviation between said entire surface temperature detected by said non-contact temperature sensor and said target temperature.

16. (currently amended) A vehicle air conditioning system, ~~including in~~ combination with a vehicle having a passenger compartment, the system comprising:

a face blowing opening communicating to a first passageway, a foot blowing opening communicating to a second passageway, and a third blowing opening, the third blowing opening being arranged in a vicinity of a passenger and communicated to a third passageway, the system comprising:

a non-contact temperature sensor mounted for detecting a temperature, without directly contacting blown air, of a sensing region including said third blowing opening, the non-contact temperature sensor being located at a front side of the front seat in the passenger compartment in a vehicle front-rear direction;

means for calculating a required blowing temperature using at least a set temperature;

means for calculating a target blowing temperature from said required blowing temperature; and

temperature adjusting means for causing the temperature of air inside said third passageway to approach said target blowing temperature in accordance with at least said target blowing temperature and an entire surface temperature of said third blowing opening detected by said non-contact temperature sensor; wherein

said vehicle includes a pillar between a front side windshield and a rear side windshield for supporting a ceiling panel, and said third blowing opening is arranged in said pillar for blowing air toward an upper half of a body of a passenger.

17.-22. (cancelled)

23. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 1, wherein the blowing opening is located in a pillar of the vehicle.

24. (currently amended) The vehicle air conditioning system in combination with the vehicle according to claim 1, wherein the blowing opening is located in a pillar of the vehicle, proximate to a driver's seat, for blowing air toward an upper side in the passenger compartment.